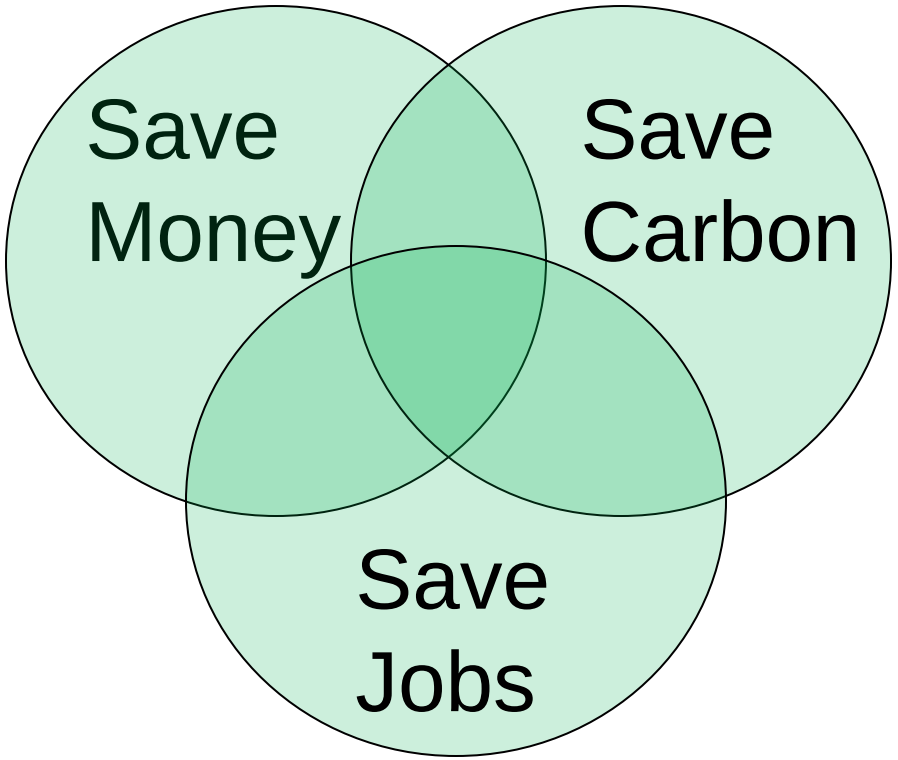
Whole Life Value

from closed-loop supply chains:



Dr. Andrew King

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Who are “we”?

Centre for Remanufacture & Reuse

www.remanufacturing.org.uk

funded by:

Who am I?

CRR Consultant

Visiting Fellow at University of Bristol

andrew.king@bristol.ac.uk

Your Real Context

Push for Sustainable Procurement

- Sustainable Communities Act 2007 / LSR+
- Climate Change Act 2008 / CRC+
- ... Etc

But... Public Finance Crisis

- Receipts down 15.3%, Spending up 7.5%
- Unemployment 2.43 million

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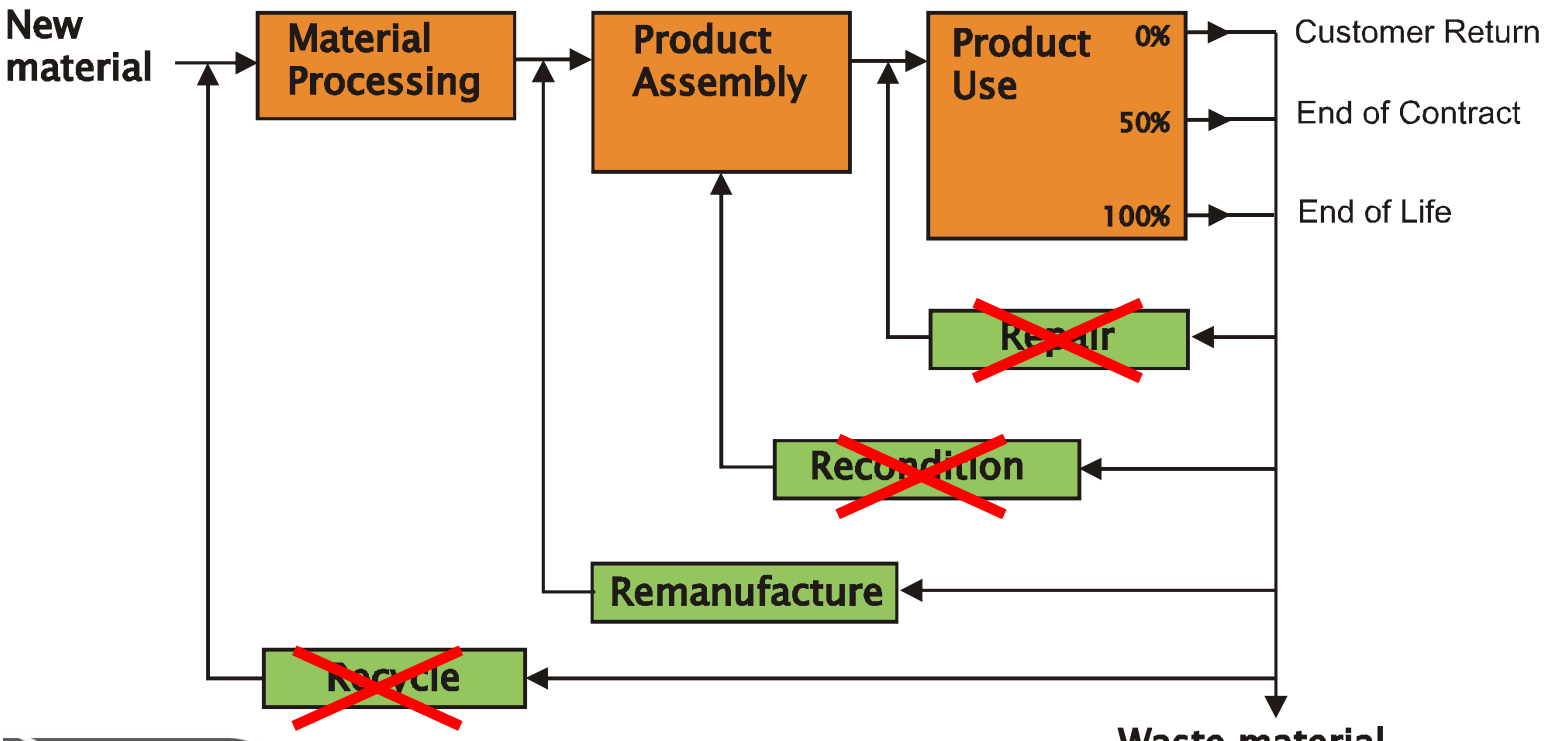
Remanufacturing

1. A way of preserving embodied energy and reducing new production waste
2. A process that brings used products to a 'like-new' functional state with a warranty to match.“



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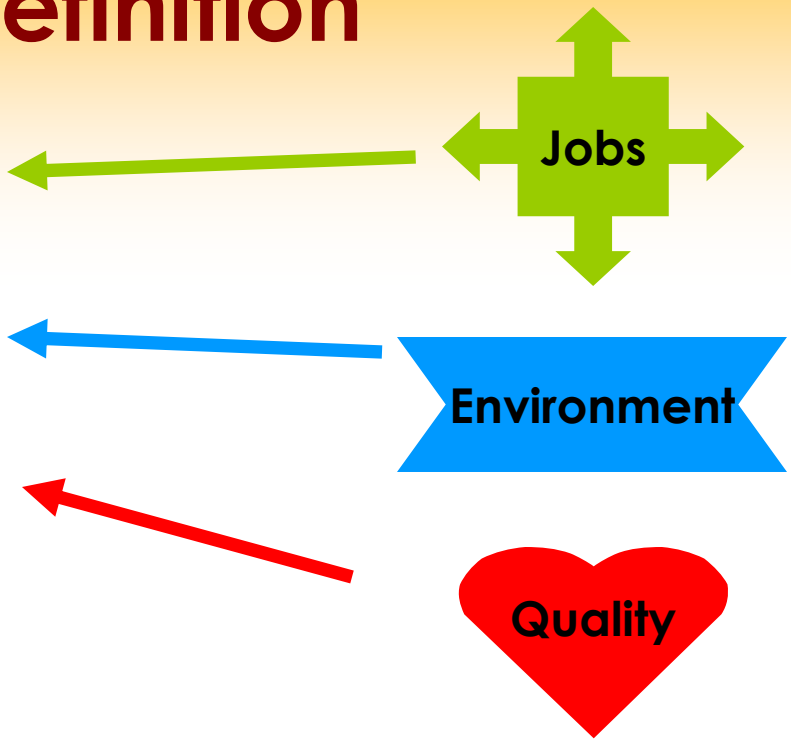
Remanufacturing definition

"The **process** of returning a used **product** to at least its original performance with a **warranty** that is equivalent or better than that of the newly manufactured product".

Source: BS 8887-2:2009.



... **Plus Consumer Savings & Producer Profit**

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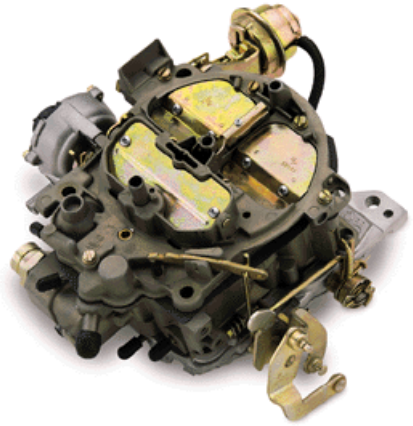
Remanufacturing Benefits
(2004 UK study)

- Significant cost savings **££ (typ. 40% discount)**
- Saving approx. **800 kt CO_{2e}** per year
- Material recovery between **50-90%**
- Product life extensions x **2,3,4,5….infinite**
- Contributes **£5 billion** to UK economy p.a.
- c. **50,000** employed in remanufacturing



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An Established Sector

XEROX

CATERPILLAR®

BAE SYSTEMS

EDWARDS

SONY

GE Healthcare

Proven Excellence by Siemens Medical Solutions

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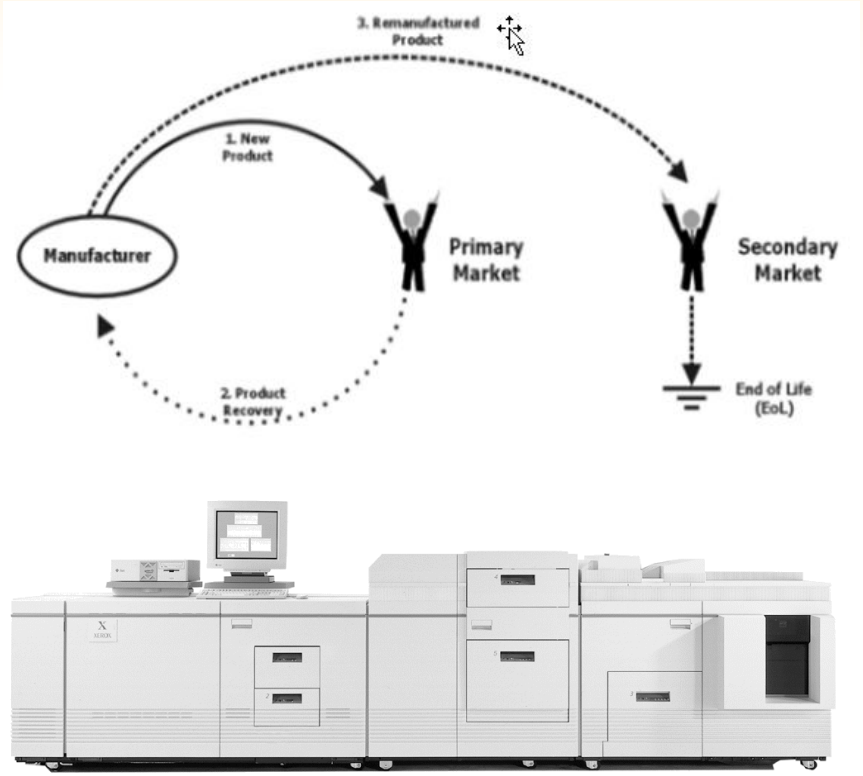
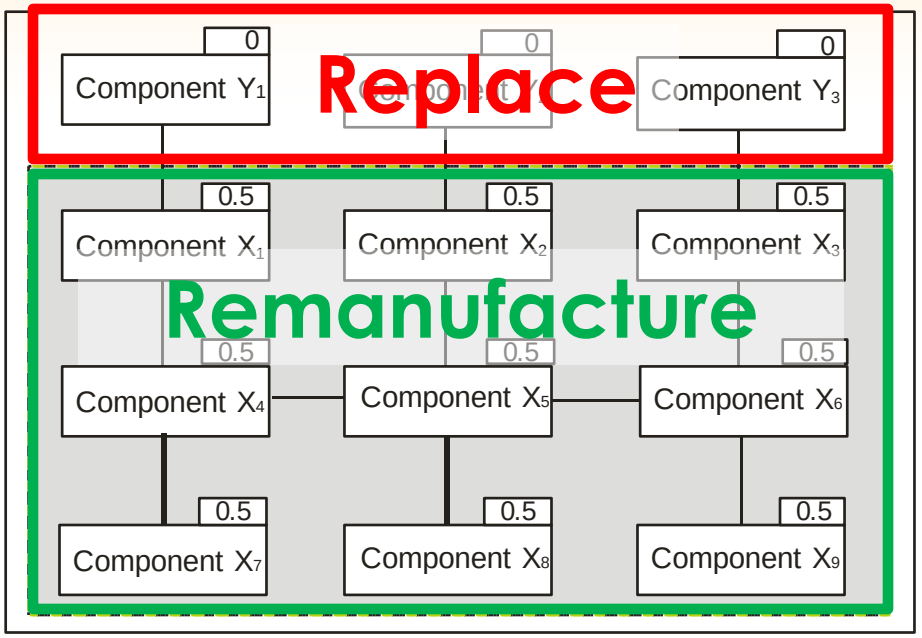
Product Remanufacturing





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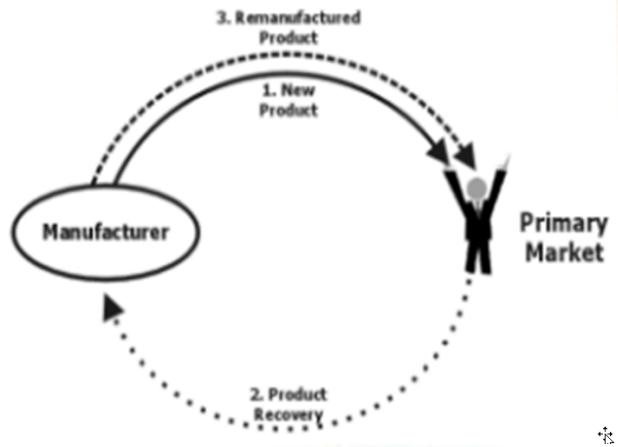
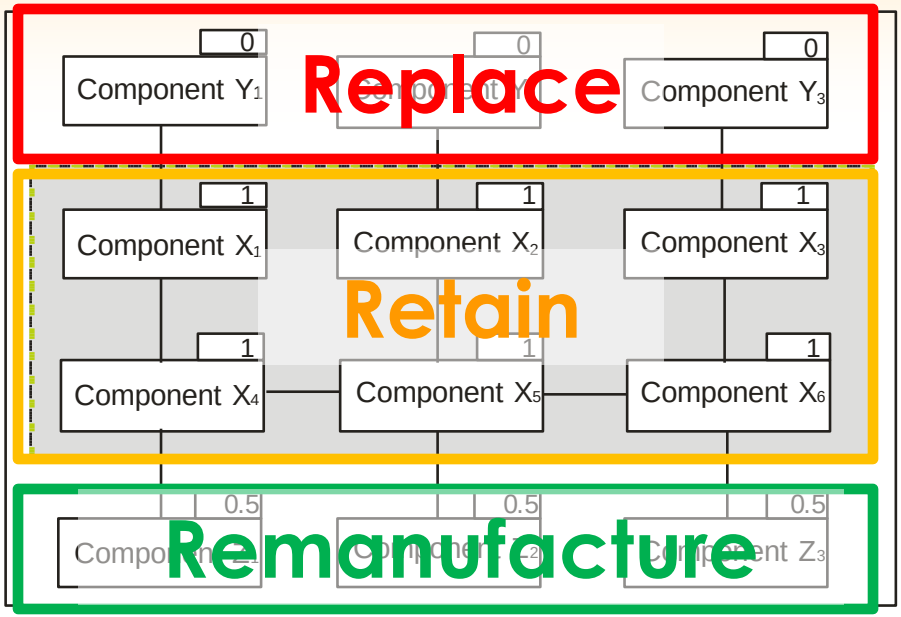
XEROX

Component Remanufacturing





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CATERPILLAR®

Opportunities for Public Sector

By procuring <u>certain</u> reman products:

1. Provide for future reduced Income as Government spending is squeezed.
2. Contribute towards future Carbon reduction targets*
3. Protect and/or generate local jobs
4. Effect scalable change using existing suppliers & logistics

*** If Whole-life Carbon**

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Typical Product Characteristics

- High £ Value or Low value-high volume
- High Embodied Energy
- Low Technological Obsolescence
- Durable & Recoverable “Core”
- Feasible Reverse Logistics

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Typical Products – Examples

- Office Furniture
- Large IT& Photocopier equipment
- Plant/Cooling Equipment
- Various Transport Maintenance
- Large Electro/Mechanical machines

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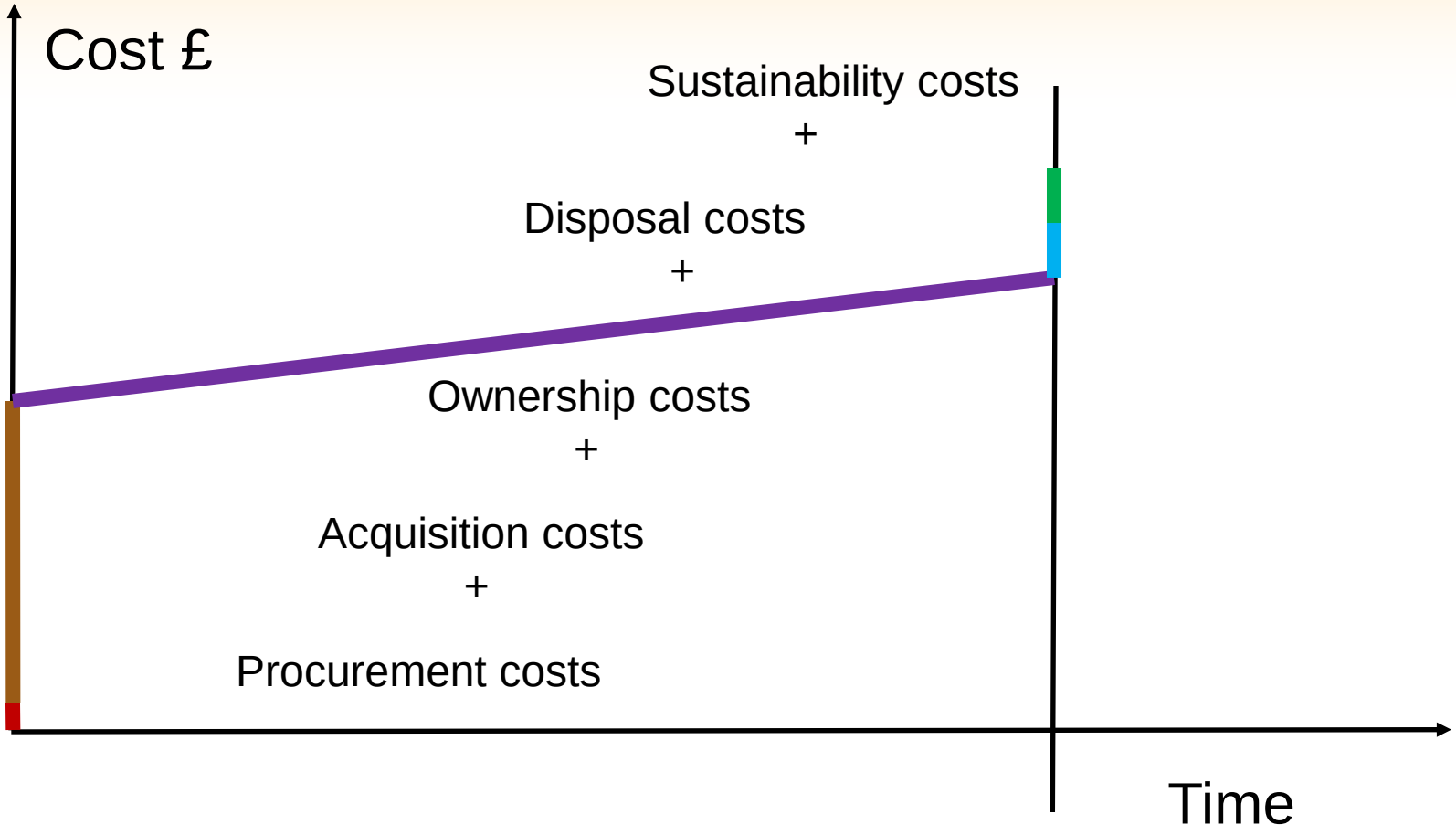
Whole Life Costing:



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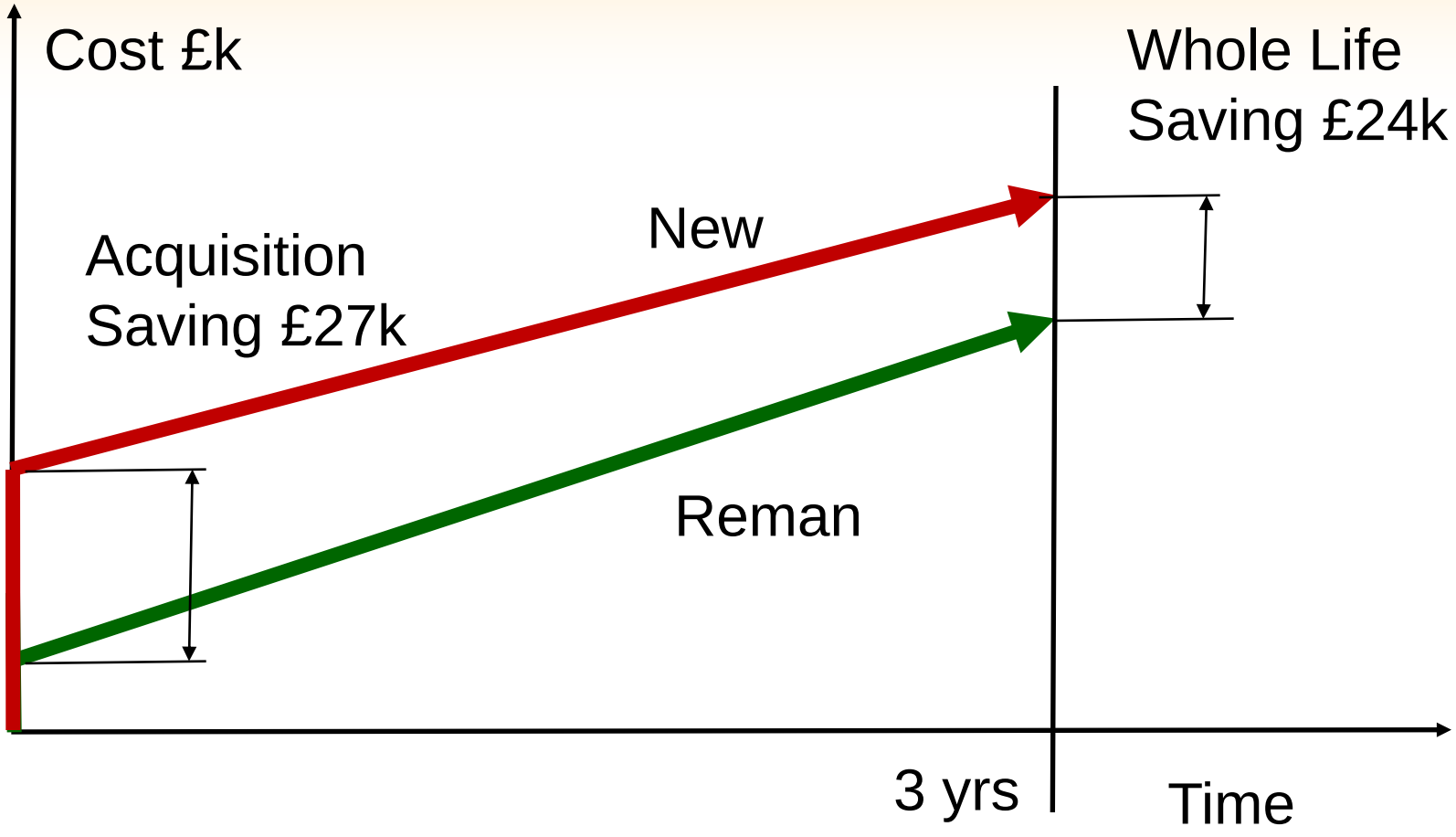
Whole Life Costing: Xerox Photocopier



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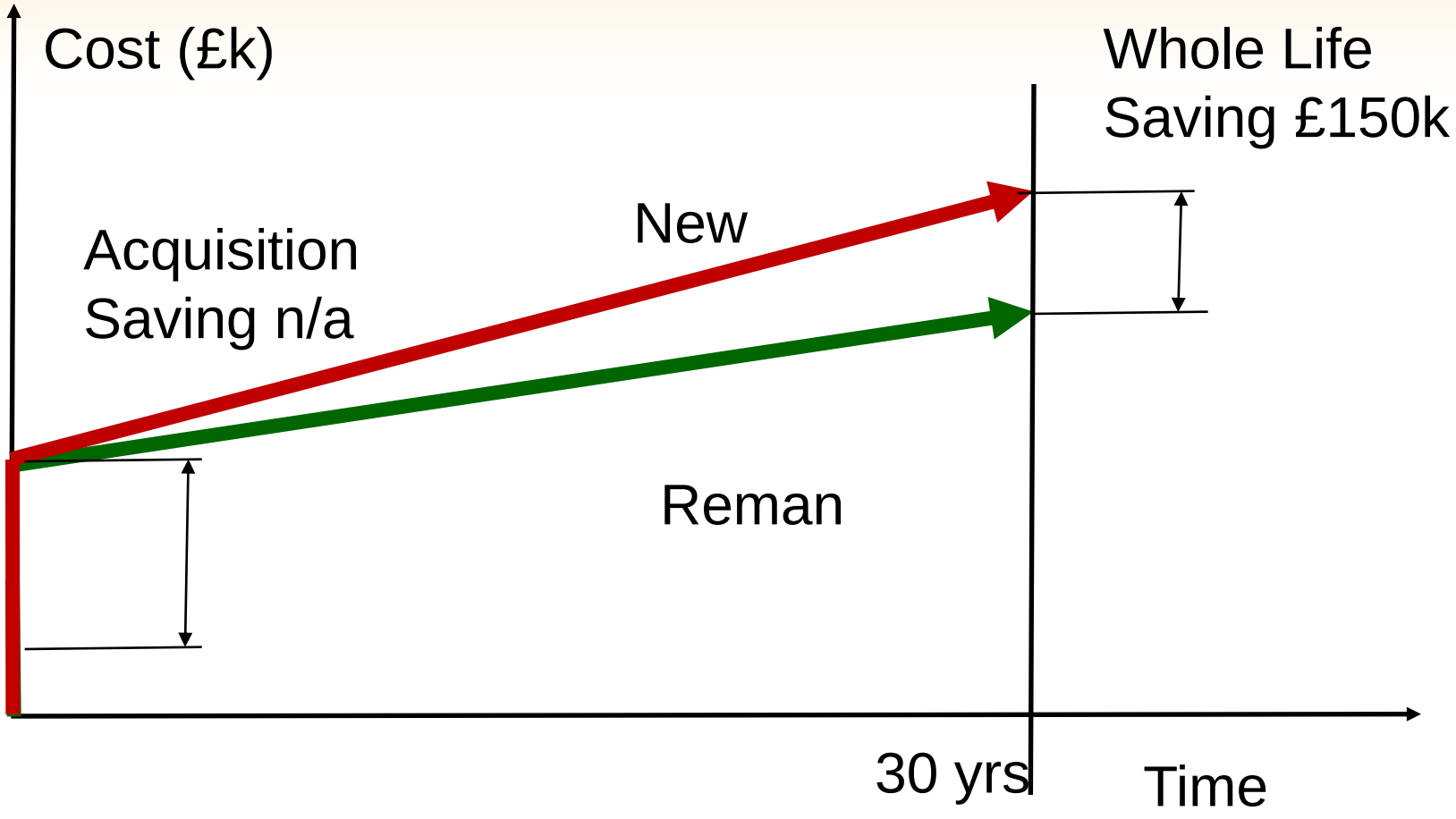
Whole Life Costing: Caterpillar Truck



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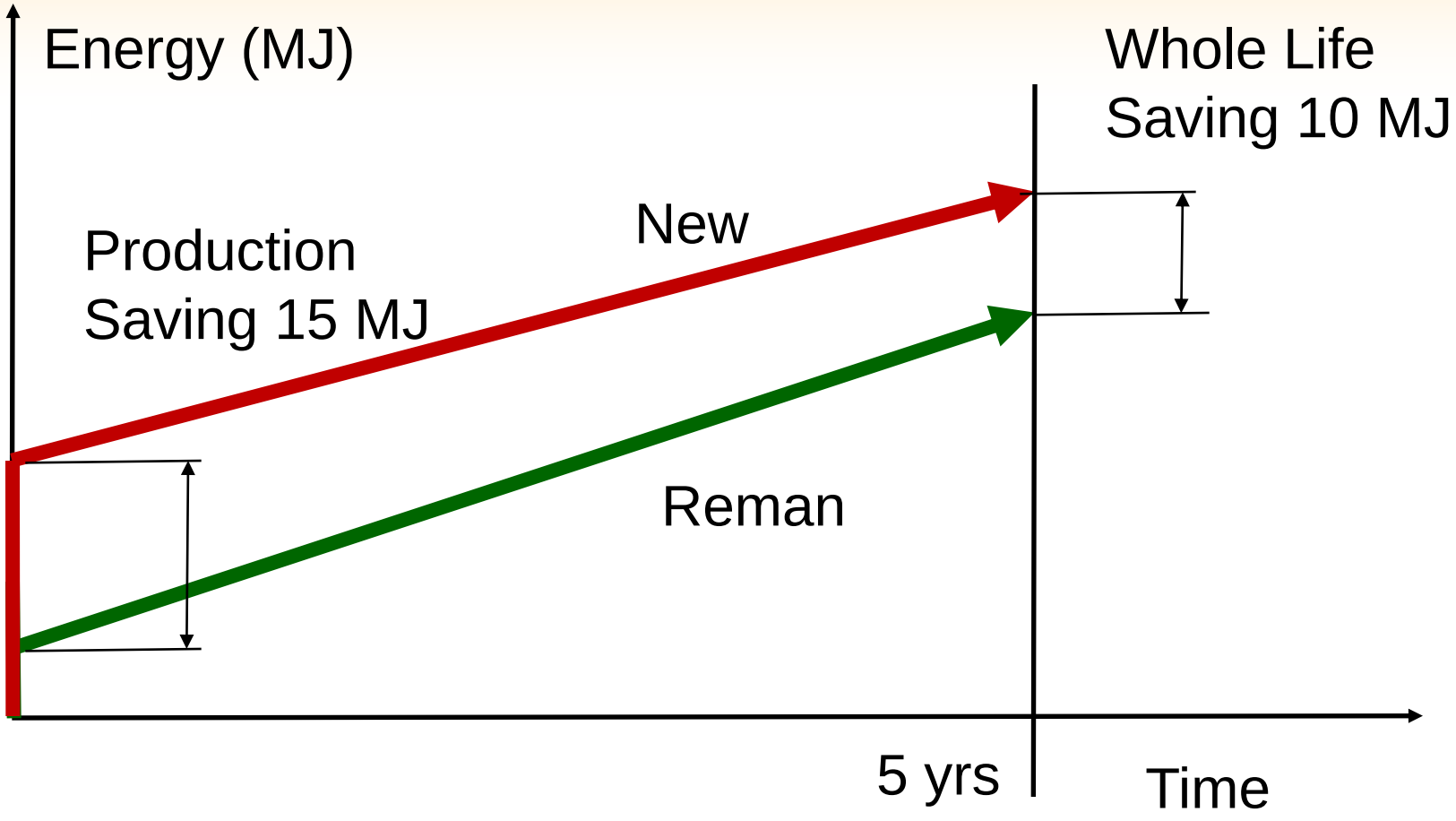
New Energy Efficient Products?



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How it would work

2. Meet Suppliers

3. MoU or Contracts

4. Supplier re-design

5. Products shipped

7. Shipped back

1. Prove Concept

6. Products used

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The Next Steps

1. Feasibility Studies
    1. Which products might be included?
    2. Financial & Environmental savings?
    3. Local Supplier job safeguard/generation?

2. Hold Stakeholders' Forum
    1. Internal stakeholders
    2. Suppliers & 3rd Party Agencies

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Questions to you…

1. Why hasn't the Public Sector pushed suppliers for this in the past?
2. Do any factors/targets work against this kind of approach?
3. What further evidence would you need to promote this in the Public Sector?

Thank you!

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